REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

After entry of the foregoing amendment Claims 1, 3, 5-10, 21-23 and 25-62 are pending in the present application. Claims 1, 7, 21, 23, 32, 33, 38, 41, 47 and 62 are amended, support for non cosmetic changes is found at least at pages 15-17 of the specification. No new matter has been added.

By way of summary, the Official Action presents the following issues: Claim 62 is objected to as to matters of form; Claims 1, 3, 5, 8-10, 21-23, 25-26, 29-33-40, 44-55, 47-55, 59, 60, and 62 stand rejected under 35 U.S.C. 103 as being unpatentable over De Maine et al. (U.S. Patent No. 3,656,178, hereinafter "DeMaine") and further in view of Cellier et al. (U.S. Patent No. 5,884,269, hereinafter "Cellier") and further in view of Witten et al. ("On the Privacy Afforded by Adaptive Text Compression", hereinafter "Witten"); Claims 6-7 and 27-28 stand rejected under 35 U.S.C. § 103 as being unpatentable over De Main, Cellier, Witten and further in view of Shimizu et al. (U.S. Patent No. 6,772,343, hereinafter "Shimizu"); Claims 41-42 and 56-57 stand rejected under 35 U.S.C. § 103 as being unpatentable over De Maine, Cellier, Witten and further in view of Weiss (U.S. Patent No. 5,479,512); and Claims 41, 43, 56 and 58 stand rejected under 35 U.S.C. § 103 as being unpatentable over De Maine, Cellier, Witten and further in view of Butler et al. (U.S. Patent No. 5,861,887, hereinafter "Butler").

Applicants thank the Examiner for the courtesy of the interview extended to the Applicants' representative on July 10, 2007. During the interview, the rejections noted in the outstanding Official Action were discussed. However, no agreement was reached pending the Examiner's further review and a response as filed.

OBJECTIONS TO THE CLAIMS

The Official Action has objected to Claim 62 as reciting an informality. As such,

Applicants have amended Claim 62 to address the informality noted at page 3 of the Official

Action of May 23, 2007. Accordingly, Applicants respectfully request that the objection to

Claim 62 be withdrawn.

REJECTION UNDER 35 U.S.C. § 103

The Official Action has outlined rejections of Claims 1, 3, 5, 8-10, 21-23, 25, 26, 29-

40, 44-55, and 59-61 under 35 U.S.C. § 103 as being unpatentable over De Maine and Cellier

in view of Witten. The Official Action contends that De Maine and Cellier disclose all of the

Applicant's claim features, with the exception of an independently selected control code.

However, the Official Action cites Witten as disclosing this more detailed aspect of the

Applicant's claimed advancement and states that it would have been obvious to one skilled in

the art at the time the advancement was made to combine the cited references for arriving at

the Applicant's claims. Applicants respectfully traverse the rejection.

Applicant's amended Claim1 recites, *inter alia*, a method for encrypting an input data

string including a plurality of bits of binary data, including:

> ... providing a control code index in the memory, the control code
> index being defined prior to encryption at the processing device, the control
> code index including a plurality of control codes each defining respective
> orders of n bit combinations of binary data, the respective orders of bit
> combinations of each control code defining control code segments;
> generating a position code using the identified control code in
> cooperation with a position code routine associated with the identified control
> code to determine positions of each of the 2^n different configurations of n bits
> in the input data string by comparing the 2^n different configurations of the
> input data string with a first one of the control code segments of the identified
> control code to identify the 2^n different configurations of the of the input data
> string which correspond to the first one of the control code segments,
> comparing additional ones of the control code segments in a serial fashion to
> previously unidentified ones of the 2^n different configurations of the data
> string, correspondences to the control code segment comparisons resulting in

> output values dictated by the position code routine which defines the
> generated position code; and
>   combining the identified control code and the generated position code
> as components of an encrypted data string. (emphasis added)

De Maine describes four compression techniques (i) Slow Mode Type 1 compression, (ii) Slow Mode Type 2 compression, (iii) Fast Mode Type 1 compression, and (iv) Fast Mode Type 2 compression. Slow Mode Type 1 compression and Slow Mode Type 2 compression, *which begin with an initial analysis of the input data string.*[1] More specifically, those byte configurations that are identified as not appearing in the input data string are designated Type 1 codes and those byte configurations that are identified as appearing more than a certain number of times within the input data string are designated as Type 2 codes. Likewise, in Fast Mode Type 1 and Fast Mode Type 2 compression, a PCORDS table is utilized which is created based upon an analysis of input data string characteristics.

Cellier describes selecting a best table of Huffman codes through the use of a best table selector (103) on the basis of a minimum cost search. In other words, the table selector (103) selects that Huffman table which when used to encode the current frame of error samples will yield the most compact encoded representation.[2] As noted at column 13, lines 24-33 of Cellier, bits 0-7 of word (702) embody a TABLE SELECT field, which identifies a specific Huffman table that was used to encode a current block of audio data. In other words, for each block of encoded data, a TABLE SELECT field will identify a specific Huffman table which was used to encode the corresponding block.

Witten describes a system for adaptive text compression in which transmitted text may be represented by randomly generated numbers.[3]

As noted in the Official Action under the heading "Response to Arguments," column 101, paragraph 3 through column 103, paragraph 1 of the De Maine is cited as describing the

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[1] De Maine at column 91, lines 47-65.
[2] Cellier at column 4, lines 46-56.
[3] See Witten at section 7.

use of a dictionary or "LEXICON" to select a byte (Type 2 code) for scanning an input data stream. Upon scanning, the selected byte is identified by position in the input data stream. A bit map is generated based upon the scanning of the input data stream. The bit map embodies a compression by identifying positions in the input data string where the selected byte of the LEXICON is present.

Conversely, in the exemplary embodiment of the Applicants' claimed advancements, a method of encrypting an input data string is provided in which a control code index is provided in memory. The control code index is defined prior to encryption and includes a plurality of control codes each defining respective orders of bit combinations of binary data. The respective orders of bit combinations of each control code define control code segments. A position code is generated using an identified control code in cooperation with a position code routine associated with the identified control code. The position code determines positions of each of 2^n different configurations of n bits in the input data string **by comparing the 2^n different configurations of the input data string with a first one of the control code segments of the identified control code to identify the 2^n different configurations of the input data string which correspond to the first one of the control code segments. Additional ones of the control code segments are compared in a serial fashion to previously identified ones of the 2^n different configurations of the data string. Correspondences to the control code segment comparisons result in output values dictated by the position code routine which defines the generated position code.** The identified control code and the generated position code are combined together as components of an encrypted data string.

For example, as noted beginning at page 14, line 20 of the specification, a position code is utilized to identify the position of each of a combination of bits with respect to an

input data string. In the example at pages 14-17, successive groups of two bits of data are analyzed in relation to the control code index.[4]

As shown in the table on page 15 of the specification, a first pass includes scanning for the control code segment "00", a second pass utilizes the control code segment 10, and so on. In this way, the control code is partitioned into control code segments which are compared in a serial fashion to the input data string such that previously identified portions of the input data string are not scanned by the later applied control code segments.

De Maine does not disclose or suggest Applicants' claimed encryption process, employing a control code which includes respective orders of bit combinations defining control code segments. Likewise, De Maine does not disclose or suggest generating a position code using a first one of the control code segments of the identified control code to identify the 2^n different configurations of the input data string which correspond to the first one of the control code segments, comparing additional ones of the control code segments in a serial fashion to previously identified ones of the 2^n different configurations of the data string, correspondences to the control code segment comparisons resulting in output values dictated by the position code routine which defines the generated position code as recited in the Applicants' amended claims. Likewise, neither Cellier nor Witten remedy the deficiencies discussed above.

Accordingly, Applicant respectfully requests that the rejection of Claims 1, 3, 5, 8-10, 21-23, 25, 26, 29-40, 44-55, and 59-61 under 35 U.S.C. § 103 be withdrawn.

The outstanding Official Action has rejected Claims 6, 7, 27, and 28 under 35 U.S.C. §103 as being unpatentable over De Maine, Cellier and Witten as applied to Claims 5 and 26, respectively, and further in view of Shimizu. The Official Action contends that De Maine, Cellier and Witten disclose all of the Applicant's claim features, with the exception of

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[4] Of course, those skilled in the art will recognize that the present application and claims are in no way limited to groups of two bits, described here for tautological purposes only.

generating a random block size. However, the Official Action cites <u>Shimizu</u> as disclosing this more detailed aspect of the Applicant's claimed advancement and states that it would have been obvious to one skilled in the art at the time the advancement was made to combine the cited references for arriving at the Applicant's claims. Applicant respectfully traverses the rejection.

As neither <u>De Maine</u>, <u>Cellier</u> nor <u>Witten</u> alone, or in combination, disclose all of the features of the Applicant's amended claims, and as <u>Shimizu</u> does not remedy the deficiency discussed above, Applicant respectfully submits that a *prima facie* case of obviousness has not been presented.

Accordingly, Applicant respectfully requests that the rejection of Claims 6, 7, 27, and 28 under 35 U.S.C. § 103 be withdrawn.

The outstanding Official Action has rejected Claims 41, 42, 56, and 57 under 35 U.S.C. § 103 as being unpatentable over <u>De Maine</u>, <u>Cellier</u> and <u>Witten</u> as applied to Claim 1, and further in view of <u>Weiss</u> (U.S. Patent No. 5,479,512). The Official Action contends that <u>De Maine</u>, <u>Cellier</u> and <u>Witten</u> disclose all of the Applicant's claim features, with the exception of XOR'ing coded data. However, the Official Action cites <u>Weiss</u> as disclosing this more detailed aspect of the Applicant's claimed advancement and states that it would have been obvious to one skilled in the art at the time the advancement was made to combine the cited references for arriving at the Applicant's claims. Applicant respectfully traverses the rejection.

As neither <u>De Maine</u>, <u>Cellier</u> nor <u>Witten</u>, alone, or in combination, disclose all of the features of the Applicant's amended claims, and as <u>Weiss</u> does not remedy the deficiency discussed above, Applicant respectfully submits that a *prima facie* case of obviousness has not been presented.

Accordingly, Applicant respectfully requests that the rejection of Claims 41, 42, 56,

and 57 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Consequently, in view of the foregoing amendment and remarks, it is respectfully

submitted that the present Application, including Claims 1, 3, 5-10, 21- 23, 25-45, 47-60 and

62, is patently distinguished over the prior art, in condition for allowance, and such action is

respectfully requested at an early date.

Respectfully submitted,

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